

Date of issue: 1st October, 2007

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SAFETY DATA SHEET

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Identification of the substance:

Product name: L-Cysteine

General name: L-Cysteine

1.2. Uses of the substance:

Various use (drugs, nutritional, industrial)

1.3. Details of the supplier of the safety data sheet:

Name of manufacture/supplier: Nippon Protein Co., Ltd.

Address: 575-1, Shimada-Cho, Ashikaga-Shi, Tochigi-Ken 326-0337, Japan

Telephone number: +81-0284-73-0111

Fax number: +81-0284-73-0753

1.4. Emergency telephone number: +81-0284-73-0111

Section 2: Hazards identification

2.1. Classification of the substance

Physical Hazards: Classification not possible

Health Hazards

Skin corrosion/irritation: Classification not possible

Eye irritation: Classification not possible

Acute toxicity: Classification not possible

Environmental Hazards: Classification not possible

2.2. Label Elements

Pictogram: Not applicable

2.3. Other hazards: No information available

Section 3: Composition/ information on ingredients

3.1. Substance

General name/Chemical Name: L-Cysteine

Synonyms: (2R)-2-Amino-3-sulfanylpropanoic acid

Concentration/concentration region(%): 98.0 - 102.0

CAS No.: 52-90-4

Reference Number in Gazetted List in Japan: 9-1590

Section 4: First aid measures

4.1. Description of first aid measures

IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If symptoms continue, call a POISON CENTER or doctor/physician.

IF ON SKIN: In case of skin irritation or discomfort, stop using the product Rinse skin with water/shower. If symptoms continue, call a POISON CENTER or doctor/physician.

IF IN EYES: Rinse cautiously with water for 15-20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If symptoms continue, call a POISON CENTER or doctor/physician.

IF SWALLOWED: Rinse mouth. Get immediate medical advice/attention.

4.2. Most important symptoms and effects, both acute and delayed

Acute effects: None known

4.3. Indication of any immediate medical attention and special treatment needed

No information available

Section 5: Firefighting measures

5.1. Extinguishing media:

Powder, fire foam, water mist or carbon dioxide.

5.2. Special hazard arising from the substance or mixture

Avoid contact with water or oxidants.

5.3. Advice for firefighters

Take action from windward.

Non-responsible personnel should escape from the fire site.

Move container to a safe area.

Fire fighters should wear appropriate personal protective equipment.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Off-limit for non-responsible personnel.

Wear appropriate personal protective equipment described in section "8. EXPOSURE

CONTROLS/PERSONAL PROTECTION" so as to prevent inhalation and exposure of eyes or skin.

6.2. Environmental precautions

Avoid release directly into the environment because product may cause local effects.

6.3. Methods and material for containment and cleaning up

Stop leakage if it is not dangerous.

6.4. Reference to other sections

Personal protection :see section 8

Section 7: Handling and storage

7.1. Precautions for safe handling

Take necessary measures described in "8. EXPOSURE CONTROLS AND PERSONAL PROTECTION".

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wash contaminated work clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technological countermeasure:

Install light and ventilation in storage rooms which are necessary to storage or handle dangerous products.

Incompatible substances or mixture:

Strong oxidisers

Conditions for safe storage:

Avoid humidity, sunlight and high temperature.

Storage in a cool and well ventilated place.

Container packaging materials:

Use a sealed container without damage or leakage.

Section 8: Exposure controls/ personal protection

8.1. Control parameters

Occupational Exposure Limits: Not specified

8.2. Exposure controls

Respiratory protection: Wear hazard mask and/or respiratory protection if necessary.
Hand protection: Wear protective gloves as appropriate.
Eye protection: Wear protective glasses or goggle as required.
Skin protection: Use safety protective clothing and apron as required.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: White crystal or crystalline powder
Odour: Characteristic odour
Melting point: 178°C
Solubility in water: 16 g/100 g H₂O (20°C)
pH: 4.5 – 5.7 (1.25 g in 50mL of H₂O)
Specific rotation[α]²⁰_D: +7.0~+10.0° (dried sample, C=8, 1mol/L HCl)

Section 10: Stability and reactivity

10.1. Reactivity

See section10.4.

10.2. Chemical stability

This substance is considered to be a non-reactive material under normal conditions.

10.3. Possibility of hazardous reactions

Possible risk of dust explosion depending on condition.

10.4. Conditions to avoid

Sunlight, high humidity, dispersion of dust.

10.5. Incompatibility materials

Oxidizing agents, strong acids, strong alkali.

10.6. Hazardous decomposition products

Carbon monoxide, carbon dioxide, nitrogen oxides, etc. may be generated.

Section 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (Oral): Rat LD₅₀ = 1.89g/kg (Oral)
Other hazards: No data.

Section 12: Ecological information

12.1. Toxicity

No data available

12.2 .Persistence and degradability

BOD = 0.93 g/g

12.3 Bio accumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No information available

Section 13: Disposal consideration

13.1. Waste treatment methods

Dispose of waste or containers in accordance with applicable local, regional and international regulations and standards.

Dispose of consulting to a certificated waste trader or local offices if they deal with the waste.

Containers are to be disposed of in accordance with related laws and regulations.

Containers should completely be cleaned up before disposal.

Section 14: Transport information

14.1.-14.5 Not classified as dangerous in meaning of transport regulations

14.6. Special precautions for users

When transporting, confirm no damage to containers. Avoid handling violently or getting wet. Load to prevent fall or falling down containers and take preventive measures of collapse.

Emergency Response Guidebook (Yellow Card) Number : Not applicable

14.7 Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC code.

Section 15: Regulatory information

15.1 Safety, health, and environmental regulations/legislation specific for the substance or mixture

Food Sanitation Act: Not applicable

Pharmaceutical Affairs Act: European Pharmacopoeia, U.S.Pharmacopoeia

Civil Aeronautics: Not applicable

Ship Safety Act: Not applicable

Act on Port Regulations: Not applicable

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

Section 16: Other information

[Caution] The SDS is prepared in compliance with JIS Z 7253:2012 based on the product data and hazard information currently available to us. However, since it may not be sufficient, the product needs to be handled with care. If new information is available, the SDS may be revised, if necessary. Since the information are provided only for normal handling, it is advisable to handle with proper safety measures for special handling.